

CLAIMS

1. An information providing apparatus for a vehicle for transmitting desired information to information equipment loaded on the vehicle, comprising:

communication means for sending and receiving desired data by means of radio communications; and

control means for controlling operations of information output means for storing said information and sending said information to said vehicle as well as operations of the communication means; wherein said control means monitors a remote control signal from an electronic key relating to a key-less entry system via said communication means, and said control means starts up operations of said information output means according to the remote control signal from said electronic key as a trigger to transmit said desired information to said vehicle.

2. A information providing apparatus for a vehicle according to claim 1, wherein said information output means sends said information via said communication means to said vehicle.

3. A information providing apparatus for a vehicle according to claim 1, wherein said control means identifies said vehicle relating to said remote control

signal from said electronic key by sending and receiving desired information via said communication means, and transmits said desired information to the vehicle based on a result of said identification.

4. A vehicle capable of downloading desired information stored in prespecified information storage means, comprising:

communication means for receiving a remote control signal from an electronic key relating to a key-less entry system; and

control means for sending and receiving desired data via said communication means; wherein said control means executes an operation for locking a door of a vehicle with said remote control signal from the corresponding electronic key detected via said communication means, and then acquires said desired information received by said communication means according to said remote control signal as a trigger.

5. The vehicle according to claim 4, wherein said control means sends and receives prespecified information with a sender of said information based on information received by said communication means according to said remote control signal as a trigger to execute processing for mutual authentication, and then acquires said desired

information based on a result of processing for the mutual authentication.

6. A method of providing information to a vehicle by transmitting desired information stored in prespecified information storage means to the vehicle, comprising the steps of:

starting up operations of said information storage means in response to a remote control signal from an electronic key relating to a key-less entry system as a trigger; and

providing said desired information to the vehicle corresponding to said remote control signal.

7. A method of providing information to a vehicle according to claim 6 further comprising the step of:

providing said desired information via communication means relating to said remote control signal stored in said corresponding vehicle.

8. A method of providing information to a vehicle according to claim 6 further comprising the step of:

executing processing for mutual authentication with said corresponding vehicle to provide said desired information based on a result of processing for the mutual authentication.